

Attorney Docket No.: UMD-0024
Inventors: Black and Woodbury
Serial No.: 10/820,380
Filing Date: April 7, 2004
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A method of inducing differentiation of an isolated marrow stromal cell into an endodermal cell, said method comprising contacting said isolated marrow stromal cell with at least one endodermal/neuronal precursor differentiation-inducing compound, thereby inducing differentiation of said isolated marrow stromal cell into a endodermal/neuronal precursor cell and contacting said endodermal/neuronal precursor cell with at least one endodermal differentiation-inducing compound thereby inducing an endodermal cell.

Claims 2-19 (canceled).

Claim 20 (previously presented): A method of producing an isolated endodermal cell, said method comprising isolating a marrow stromal cell, contacting said isolated marrow stromal cell with at least one endodermal/neuronal precursor differentiation-inducing compound, thereby inducing differentiation of said isolated marrow stromal cell into a endodermal/neuronal precursor cell and contacting said endodermal/neuronal precursor cell with an endodermal differentiation-inducing compound thereby producing an endodermal cell.

Claim 21 (canceled).

Claim 22 (original) A method of treating a human patient having a disease, disorder or condition of an endodermal tissue,

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said method comprising obtaining a bone marrow sample from a human donor, isolating stromal cells from said bone marrow sample, inducing said stromal cells to differentiate into selected isolated endodermal cells, and administering said selected isolated endodermal cells to the body of said human patient, wherein the presence of said selected isolated neuronal cells in said body of said human patient effects treatment of said disease; disorder or condition.

Claim 23 (canceled).

Claim 24 (original): The method of claim 22, wherein prior to administering said selected isolated endodermal cells, said selected isolated endodermal cells are transfected with an isolated nucleic acid encoding a therapeutic protein or peptide, wherein when said protein or peptide is expressed in said cells said protein or peptide serves to effect treatment of said disease, disorder or condition.

Claim 25 (canceled).

Claim 26 (original): A method of treating a human patient in need of endodermal cells, said method comprising obtaining marrow stromal cells from a human patient, propagating said marrow stromal cells in culture under conditions that induce their differentiation into selected endodermal cells, transplanting said selected endodermal cells into said human patient in need of said selected endodermal cells, thereby treating said human patient in need of endodermal cells.

Claim 27 (canceled).

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Claim 28 (previously presented): An isolated endodermal cell made by a method of claim 1.

Claims 29-30 (canceled).

Claim 31 (previously presented): An isolated endodermal cell made by a method of claim 1, wherein said endodermal cell is further transfected with an isolated nucleic acid encoding a therapeutic protein or peptide, and further wherein when said protein or peptide is expressed in said cell said protein or peptide serves to effect treatment of a disease, disorder, or condition associated with a tissue of endodermal origin.

Claims 32-33 (canceled).

Claim 34 (previously presented): An isolated endodermal cell made by a method of claim 20.

Claims 35-36 (canceled).

Claim 37 (previously presented): An isolated endodermal cell made by a method of claim 20, wherein said endodermal cell is further transfected with an isolated nucleic acid encoding a therapeutic protein or peptide, and further wherein when said protein or peptide is expressed in said cell, said protein or peptide serves to effect treatment of a disease, disorder, or condition associated with a tissue of endodermal origin.

Claims 38-40 (canceled).

Claim 40 (previously presented): A marrow stromal cell-derived cell culture that comprises cells, at least some of which

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simultaneously express polypeptide or mRNA markers that are characteristic of at least endodermal and ectodermal cell types.

Claims 41-45 (canceled).

Claim 46 (previously presented): A method of producing an isolated endodermal/neuronal precursor cell, said method comprising

- 1) isolating a marrow stromal cell; and
- 2) culturing the marrow stromal cell under conditions suitable to produce an endodermal/neural precursor culture that comprises cells at least some of which simultaneously express polypeptide or mRNA markers that are characteristic of at least endodermal and ectodermal cell types.

Claims 47-50 (canceled).